ABSTRACT: The purpose of this study was to describe speech-language pathologists’ (SLPs’) knowledge of and attitudes toward aging and the elderly and to evaluate relationships between knowledge, aging, and other characteristics of the SLPs. Eighty-three SLPs who work in health care settings reported their knowledge and attitudes toward aging and the elderly using the Facts on Aging Quiz 1 (FAQ1). They also completed a survey in which they provided information regarding their personal background, education, caseload, social experience with older individuals, and professional interest in working with the elderly. The SLPs in this study had knowledge of aging scores that were similar to those reported for students in communication disorders (CDIS), students in other professions, and some other health care professionals. The SLP participants reported a negative bias toward aging and the elderly. This is consistent with other studies of health care workers, but is in contrast to a mild positive bias reported for CDIS students. Multiple correlation analysis did not identify any statistically significant relationships between SLPs’ self-reported characteristics and either knowledge or attitude scores. There was a statistically significant negative correlation between knowledge scores and negative attitude scores: Those SLPs with higher knowledge scores had lower negative bias scores. Overall, the findings indicate that SLPs working in health care settings have a negative bias toward aging and the elderly. The underlying factors resulting in the attitudes, and the means for optimizing SLPs’ knowledge and attitudes toward aging and the elderly, will require further investigation.

KEY WORDS: aging, elderly, attitude, knowledge, speech-language pathologist
et al. (1998) found that rehabilitation professionals from nine different disciplines tended to perceive older individuals as more difficult to work with than younger individuals. The availability, extent, and quality of health care provided could be adversely affected by negative attitudes toward older individuals because there is a general tendency to devalue the medical and rehabilitation potential of older individuals (Coe, 1967; Pearlman & Uhlmann, 1988; Williams & Connolly, 1990). This devaluation may stem, in part, from the fact that health care professionals and physicians often underestimate the quality of life of older individuals (Pearlman & Uhlmann, 1988).

The literature generally supports the conclusion that health care workers tend to hold negative views of older individuals just as nonhealth care workers do (e.g., Palmore, 1988; see Perry, 1995 for review). Investigation of whether health care workers have positive or negative attitudes toward elderly individuals is important because negative attitudes may lead to ageism (Bearden & Head, 1986). Ageism has been broadly defined as the stereotypic and usually negative bias toward older individuals (Butler, 1969). Ageism can result in unnecessary institutionalization and denial of services for mental and physical conditions (Bearden & Head, 1986; Gavitz, 1974; Healey, 1993). It is unfortunate that any persons would have negative perceptions of older individuals. However, the documentation of such attitudes among health care workers is particularly troubling because the consequences of negative attitudes toward the elderly could be quite severe in terms of a person’s health. A clearer understanding of the attitudes that health care workers have toward older adults, and of the variables that positively and negatively influence these attitudes, is needed in order to begin addressing this issue.

Prior studies have found that attitudes toward elderly patients may vary as a function of the health care workers’ particular profession, requiring discipline-specific investigation of the issue. For example, registered nurses and social workers were found to have more positive attitudes toward elderly patients’ rehabilitation potential than licensed practical nurses, physical therapists, and housecleaners (Kosberg & Gorman, 1975). Using factor analysis with responses to their 60-item survey, Nicholas et al. (1998) found that professionals within a given discipline tended to hold similar perceptions of older adults, but the level of agreement in ratings for any given factor varied across disciplines. For example, physicians tended to agree and react more strongly to survey items regarding physical limitations of older adults, whereas nurses agreed more strongly with items regarding negative psychological factors (e.g., “When compared to younger patients, older patients...have less motivation,” “have more self-esteem problems”).

At present, very little is known about the attitudes that certified speech-language pathologists (SLPs) have toward aging and the elderly. As far as the authors are aware, in the studies of rehabilitation professionals’ perceptions of elderly individuals, only Nicholas et al. (1998) have included SLPs. In that study, the SLPs as a group did not differ significantly from the other eight disciplines in the perceptions expressed in the survey. However, these authors pointed out that they used a nonstandardized, self-constructed instrument that was not theory driven or based on particular hypotheses. In addition, the authors pointed out that they did not intend to detect negative attitudes, but rather were simply interested in describing the perceptions that rehabilitation professionals have of older patients.

Attitudes toward the elderly have been reported for students in communication disorders (CDIS). Gabel, Searl, and Fulks (2003) used the Facts on Aging Quiz 1 (FAQ1, Palmore, 1988) to measure knowledge of aging and the elderly as well as attitudes toward the elderly. In that study, undergraduate students majoring in CDIS reported a mild positive bias toward aging and the elderly. These students also had knowledge scores that were similar to those of students in other disciplines (e.g., Duerson, Thomas, Chang, & Stevens, 1992; Wilson & Glamser, 1982). It is important for the profession of speech-language pathology to understand the attitudes toward aging that students in training tend to hold because such information could help guide curricular and clinical training decisions. However, it would not be prudent to extrapolate the findings from CDIS students to practicing SLPs. It may be that work experience, continuing education experiences, and maturation of the speech-language pathology clinicians themselves have a significant influence on SLPs’ knowledge and attitudes toward aging. In fact, Nicholas et al. (1998) suggested that negative perceptions of health care workers caring for older patients may have been a result, in part, of direct and repeated observation of the declining health that often accompanies aging. It may be that repeated contact with older individuals who have health care problems provides a skewed, negative perception of aging and the elderly in general. Some support for this possibility has been provided by studies of physicians (Hall, Epstein, DeCiantis, & McNeil, 1993) and psychotherapists (James & Haley, 1995) who work with elderly clients. If the same is true in the SLP field, differences between CDIS students and practicing clinicians would seem to be a real possibility.

This study had three foci. The first was to measure SLPs’ knowledge of and attitudes toward aging and the elderly. The second was to evaluate the relationship between the SLPs’ attitudes and their knowledge of aging and the elderly. The third was to evaluate the relationships between SLPs’ reported attitudes and knowledge of aging and the elderly, their academic interest in gerontology, their professional interest in aging, and their amount of personal contact with the elderly.

### METHOD

### Participants

Eighty-three licensed SLPs working in hospitals, rehabilitation settings, and nursing homes participated in this study. Ninety-four percent of the participants were female. The mean age was 38 years (SD = 8.4 [years;months]). One-hundred percent of the participants reported their ethnicity as Caucasian. All of the SLPs indicated that they were...
certified by the American Speech-Language-Hearing Association (ASHA). The mean number of years working as an SLP was 12.4 (SD = 8.0), and the mean number of years in current position was 5.1 (SD = 4.0). Seventy-three of the SLPs (88%) had either an MS or an MA degree. The remaining 10 participants (12%) had either a PhD or an EdD. A breakdown of the work settings in which participants were employed is provided in Table 1. The largest percentage of participants reported working in a nursing home (~40%), followed by acute care hospitals (~25%).

Procedures

SLPs in the state of Ohio who identified themselves as having worked in health care settings were recruited for participation in this study. During the recruitment phase, 300 SLPs were mailed a packet of information about the study and 83 were returned (28% response rate). A cover letter included a description of the study, directions for completing the survey, and information regarding their rights as research participants. The packet contained a short demographic questionnaire (see Appendix) and the FAQ1 (Palmore, 1988). A self-addressed, stamped envelope was included for participants to return the survey and FAQ1.

The demographic questionnaire included items in which the SLPs reported information about themselves, including age, gender, ethnicity, years as an SLP, years in their current position, work setting, and caseload characteristics (e.g., size, percentage of older clients, types of disorders they typically treat). The survey also included items for participants to report their level of interest in working with the elderly, academic exposure to aging and the elderly, perceived benefit of their coursework toward their present career path, amount of personal time (nonwork related) spent with older adults, and interest in spending more time with older adults. These items were developed based on a review of the literature regarding factors that may be influential on a person’s attitudes and knowledge toward the elderly. These questions were also developed to obtain information specific to the research questions addressed in this study.

The FAQ1 (Palmore, 1988) was used to measure the SLPs’ knowledge of aging. This scale was chosen because of the anti-aged bias from the pro-aged bias. Sixteen items, when answered incorrectly, have been designated as indicating an anti-aged bias in the participants. A pro-aged bias is indicated by incorrect responses on five specified survey items. The third bias score is calculated by tabulating the number of inaccurate participant responses to certain subsets of items on the FAQ1. Sixteen items, when answered incorrectly, have been designated as indicating an anti-aged bias in the participant. A pro-aged bias is indicated by incorrect responses on five specified survey items. The third bias score is referred to as the net bias. It is calculated by subtracting the anti-aged bias from the pro-aged bias.

Statistical Analysis

For all demographic items, descriptive statistics (means, frequencies, and standard deviations) were reported. Descriptive statistics (means and standard deviations) were also calculated for the knowledge and bias scores from the FAQ1 (Palmore, 1988). Relationships between demographic variables, knowledge scores, and bias scores were evaluated by calculating Pearson correlation coefficients (significance level was set at p < .05 for all correlations).

RESULTS

Descriptive Statistics

Demographic data. Descriptive data (means and standard deviations) for the background variables (items 1–7) were calculated and reported as part of the description of the participants in the Method section. Item 8 asked participants...
to indicate the size of their typical caseload and the percentage of the caseload that is made up of older adults. The mean size of the caseload was 13 individuals (SD = 10). The mean percentage of caseload over age 70 was 64% (SD = 34%). A frequency distribution of the percentage of the caseload over age 70 is given in Table 2. Item 9 asked the SLPs to indicate what percentage of their clients had various types of communication or swallowing impairments. Frequency distributions of the percentage of clients with each type of communication/swallowing disorder are given in Table 3. Although there are a number of ways to interpret these distributional data, the overall finding is that dysphagia and cognitive deficits make up a larger percentage of the caseloads for more of the participants than other areas such as apraxia, voice/resonance, and head/neck cancer rehabilitation.

On item 10, participants rated their level of professional interest in working with the elderly. The mean rating was 4.2 (SD = 0.95) on a 5-point scale, with 1 = low and 5 = high. Forty-eight percent reported a 5, 37% reported a 4, 7% reported a 3, 5% reported a 2, and 1% reported a 1. Participants rated the perceived benefit of academic exposure they had in the area of aging. The mean rating was 3.4 (SD = 1.1). Sixteen percent reported a 5, 33% reported a 4, 31% reported a 3, 16% reported a 2, and 5% reported a 1. Participants rated the perceived benefit of this coursework on item 12. The mean rating was 3.6 (SD = 1.1). Twenty-one percent reported a 5, 37% reported a 4, 27% reported a 3, 11% reported a 2, and 5% reported a 1.

Items 13 and 14 focused on time spent with older adults and interest in spending additional time with older adults. For item 13 (time spent with older adults), the mean rating was 3.1 (SD = 1.0) on a 5-point scale, with 1 = low and 5 = high. Six percent reported a 5 on this item, 33% reported a 4, 30% reported a 3, 27% reported a 2, and 5% reported a 1. For item 14 (interest in spending more time with the elderly), the SLPs had a mean rating of 3.2 (SD = 1.1). Thirteen percent reported a 5, 24% reported a 4, 43% reported a 3, 7% reported a 2, and 12% reported a 1.

**Knowledge.** The results for the FAQ1 (Palmore, 1988) are presented in Table 4. For this study, the mean score for the FAQ1 was 3.6 (SD = 0.5). A frequency distribution of the percent correct on this item is given in Table 4. The mean anti-aged score for the SLPs in this study was 22.6% (SD = 15%). The pro-aged bias score (percentage of incorrect items for a subset of items designated as pro-aged) is the second attitude score extracted from the FAQ1. A pro-aged bias suggests an unrealistically positive outlook on aging, which can reportedly be just as harmful as a negative bias (Palmore, 1988). The mean pro-aged bias score was 34% (SD = 19%).

**DISCUSSION**

**SLPs’ Knowledge of Aging and the Elderly**

One purpose of this study was to measure the knowledge that SLPs working in health care settings have of aging and the elderly. The knowledge scores for the certified SLPs in...
Table 3. Frequency distribution of the percentage of clients having each type of communication or swallowing disorder.

<table>
<thead>
<tr>
<th>Disorder type</th>
<th>% of clients on the caseload with that disorder</th>
<th>Number of participants</th>
<th>Percentage of participants</th>
<th>Cumulative percentage of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aphasia</td>
<td>0–20</td>
<td>52</td>
<td>62.7</td>
<td>62.7</td>
</tr>
<tr>
<td></td>
<td>21–40</td>
<td>25</td>
<td>30.1</td>
<td>92.8</td>
</tr>
<tr>
<td></td>
<td>41–60</td>
<td>4</td>
<td>4.8</td>
<td>97.6</td>
</tr>
<tr>
<td></td>
<td>61–80</td>
<td>2</td>
<td>2.4</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>81–100</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td>Dysarthria</td>
<td>0–20</td>
<td>54</td>
<td>65.1</td>
<td>65.1</td>
</tr>
<tr>
<td></td>
<td>21–40</td>
<td>15</td>
<td>18.1</td>
<td>83.2</td>
</tr>
<tr>
<td></td>
<td>41–60</td>
<td>10</td>
<td>12.0</td>
<td>95.2</td>
</tr>
<tr>
<td></td>
<td>61–80</td>
<td>4</td>
<td>4.8</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>81–100</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td>Apraxia</td>
<td>0–20</td>
<td>70</td>
<td>84.3</td>
<td>84.3</td>
</tr>
<tr>
<td></td>
<td>21–40</td>
<td>12</td>
<td>14.5</td>
<td>98.8</td>
</tr>
<tr>
<td></td>
<td>41–60</td>
<td>1</td>
<td>1.2</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>61–80</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>81–100</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td>Dysphagia</td>
<td>0–20</td>
<td>14</td>
<td>16.9</td>
<td>16.9</td>
</tr>
<tr>
<td></td>
<td>21–40</td>
<td>9</td>
<td>10.8</td>
<td>27.7</td>
</tr>
<tr>
<td></td>
<td>41–60</td>
<td>29</td>
<td>35.0</td>
<td>62.7</td>
</tr>
<tr>
<td></td>
<td>61–80</td>
<td>24</td>
<td>28.9</td>
<td>91.6</td>
</tr>
<tr>
<td></td>
<td>81–100</td>
<td>7</td>
<td>8.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Cognitive impairment</td>
<td>0–20</td>
<td>41</td>
<td>49.4</td>
<td>49.4</td>
</tr>
<tr>
<td></td>
<td>21–40</td>
<td>20</td>
<td>24.1</td>
<td>73.5</td>
</tr>
<tr>
<td></td>
<td>41–60</td>
<td>8</td>
<td>9.6</td>
<td>83.1</td>
</tr>
<tr>
<td></td>
<td>61–80</td>
<td>10</td>
<td>12.1</td>
<td>95.2</td>
</tr>
<tr>
<td></td>
<td>81–100</td>
<td>4</td>
<td>4.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Voice/resonance</td>
<td>0–20</td>
<td>78</td>
<td>94.0</td>
<td>94.0</td>
</tr>
<tr>
<td></td>
<td>21–40</td>
<td>2</td>
<td>2.4</td>
<td>96.4</td>
</tr>
<tr>
<td></td>
<td>41–60</td>
<td>1</td>
<td>1.2</td>
<td>97.6</td>
</tr>
<tr>
<td></td>
<td>61–80</td>
<td>1</td>
<td>1.2</td>
<td>98.8</td>
</tr>
<tr>
<td></td>
<td>81–100</td>
<td>1</td>
<td>1.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Laryngectomy, head/neck</td>
<td>0–20</td>
<td>82</td>
<td>98.8</td>
<td>98.8</td>
</tr>
<tr>
<td>cancer</td>
<td>21–40</td>
<td>1</td>
<td>1.2</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>41–60</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>61–80</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>81–100</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td>Other</td>
<td>0–20</td>
<td>79</td>
<td>95.2</td>
<td>95.2</td>
</tr>
<tr>
<td></td>
<td>21–40</td>
<td>2</td>
<td>2.4</td>
<td>97.6</td>
</tr>
<tr>
<td></td>
<td>41–60</td>
<td>2</td>
<td>2.4</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>61–80</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>81–100</td>
<td>0</td>
<td>0.0</td>
<td>—</td>
</tr>
</tbody>
</table>

The knowledge scores from the SLPs suggest that they have a knowledge of aging that is comparable to that of some other groups of individuals. However, it is disconcerting that professionals in a work setting involving significant interaction with elderly individuals do not demonstrate greater knowledge than students in the same profession or other groups of professionals. There are other professionals with graduate school education in the social, health, and medical sciences that have reported higher scores than those found for the current group of SLPs. For example, nurses with a master’s degree and individuals with graduate degrees in human development (Palmore, 1980) both had percentage correct scores on the FAQ1 that were at least 13% higher than that for the SLPs in the current study. Also, individuals with training in gerontology...
Table 4. Descriptive statistics from the Facts on Aging Quiz 1.

<table>
<thead>
<tr>
<th>Knowledge variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total items correct</td>
<td>16.0</td>
<td>2.9</td>
<td>10-23</td>
</tr>
<tr>
<td>Percentage of items correct</td>
<td>64.0</td>
<td>11.6</td>
<td>40-92</td>
</tr>
<tr>
<td>Anti-aged bias score</td>
<td>22.6</td>
<td>15.3</td>
<td>0-56</td>
</tr>
<tr>
<td>Pro-aged bias score</td>
<td>15.7</td>
<td>19.0</td>
<td>0-100</td>
</tr>
<tr>
<td>Net bias score</td>
<td>-7.0</td>
<td>26.6</td>
<td>-56-94</td>
</tr>
</tbody>
</table>

Table 5. Correlation matrix for demographic/background variables and knowledge and attitude variables from the Facts on Aging Quiz 1. Pearson correlation coefficient values are given in each cell. None of the correlations was statistically significant at the .05 level.

<table>
<thead>
<tr>
<th>Knowledge/attitude variable</th>
<th>Caseload size</th>
<th>Percentage of caseload over 70</th>
<th>Academic interest in aging</th>
<th>Amount of academic exposure</th>
<th>Coursework benefit on current career</th>
<th>Personal time spent with older adults</th>
<th>Interest in spending more time with older adults</th>
<th>SLP age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total items correct</td>
<td>-.072</td>
<td>.119</td>
<td>.065</td>
<td>.026</td>
<td>-.004</td>
<td>-.120</td>
<td>.014</td>
<td>-.001</td>
</tr>
<tr>
<td>% items correct</td>
<td>-.072</td>
<td>.119</td>
<td>.065</td>
<td>.026</td>
<td>-.004</td>
<td>-.120</td>
<td>.014</td>
<td>-.001</td>
</tr>
<tr>
<td>Anti-aged bias score</td>
<td>-.114</td>
<td>.095</td>
<td>.036</td>
<td>.007</td>
<td>.007</td>
<td>.089</td>
<td>.011</td>
<td>.024</td>
</tr>
<tr>
<td>Pro-aged bias score</td>
<td>.122</td>
<td>-.008</td>
<td>.018</td>
<td>.045</td>
<td>.045</td>
<td>.209</td>
<td>.140</td>
<td>-.062</td>
</tr>
<tr>
<td>Net-aged bias score</td>
<td>.152</td>
<td>-.060</td>
<td>-.008</td>
<td>.028</td>
<td>.028</td>
<td>.098</td>
<td>.094</td>
<td>-.058</td>
</tr>
</tbody>
</table>
Frequent exposure to older individuals who are ill may be one possible explanation for a reduction in the positive bias noted in the more clinically experienced SLP professionals in this study as compared to the CDIS students in the Gabel et al. (2003) investigation. Even short-term but daily contact with older individuals who are ill has been shown to result in a reduction in pro-aged bias in medical students (van Zuilen et al., 2001). Similarly, the health of an older individual can serve to modulate physicians’ and psychotherapists’ attitudes toward elderly patients with ill health associated with less positive, and more negative, attitudes (Hall et al., 1993; James & Haley, 1995). Investigators have speculated that exposure to ill and semi-dependent elderly patients results in a more realistic view of the health-related changes that can accompany advancing age (Nicholas et al., 1998). In short, health care workers’ negative attitudes toward the elderly may be an outcome of biased exposure to less healthy older individuals (Adelman & Albert, 1987; Milligan, Prescott, Powell, & Fürchtgott, 1989).

The net bias score can be somewhat misleading if one fails to appreciate what it really reflects. Therefore, it deserves a brief description before discussing the results for this score in the present study. The net bias score takes into account both positive and negative biases. Biases in both directions are considered to be potentially harmful (Palmore, 1988). The net bias score is not a summation of these harmful biases, but rather a subtraction of one score from the other. As such, the net bias is a means for specifying which attitudinal direction predominates, but not an indication of the magnitude of the overall bias.

The SLPs in this study had a mean net bias score of −7.0. This suggests that, in general, they had greater negative biases than positive. This finding that negative attitudes predominate in the SLPs is consistent with studies of other health care workers (Bearden & Head, 1986; Coe, 1967; Kosberg & Harris, 1978; Nicholas et al., 1998; Pearlman & Uhlmann, 1988). Although there was a negative net bias score for the SLPs in this study, undergraduate and graduate CDIS students in the Gabel et al. study (2003) had a positive net bias score. The difference in net bias scores is readily explained by the smaller positive bias for the SLPs relative to the CDIS students in the presence of a nearly identical negative bias for the two groups.

Relationships Among Demographic Variables, Knowledge, and Attitudes

Multiple correlation analysis found that the SLPs’ knowledge and attitudes were not significantly correlated with SLP age, caseload characteristics, training, personal time spent with older individuals, or level of interest in spending more time with older adults. This is in contrast to Gabel et al. (2003), who found that knowledge scores for CDIS students were positively correlated with academic interest, amount of coursework, and involvement in groups of older adults. The lack of any significant correlations between demographic variables and knowledge and attitude scores in the current study is somewhat surprising. Greater interest in aging and exposure to older individuals generally has been found to be associated with more positive attitudes toward the elderly for other groups of respondents (Green, Keith, & Pawlson, 1983; Hale, 1998; Holtzman et al., 1979; Knox et al., 1986). Similarly, academic exposure has been reported to be associated with greater knowledge (Knapp & Stubblefield, 1998) and more positive attitudes toward aging (Block, 1982; Holtzman et al., 1979; Warren, Painter, & Rudisill, 1983). The reason for the lack of any such relationships in the data from the current group of SLPs is not obvious.

Future studies are needed to better understand the variables that are strongly associated with knowledge and attitudes of SLPs regarding aging and the elderly.

Knowledge scores and anti-aged bias scores from the FAQ1 (Palmore, 1988) were significantly correlated for the SLPs in this study. The relationship was negative, indicating that increased knowledge was associated with a less negative attitude toward aging. In some ways, this is a curious finding given that the amount of academic exposure was not correlated with the anti-aged bias score as noted above. The most parsimonious explanation is that perhaps the SLPs’ knowledge of aging is not derived (at least not principally) from their coursework on aging, but rather from clinical experience, their own aging/maturity, or other as yet undetermined sources.

A negative correlation between knowledge scores and anti-aged bias scores was also found by Gabel et al. (2003) in their study of CDIS students. Based on these findings, Gabel et al. suggested that SLP training institutions should consider adding more aging-related coursework/experiences to their curriculum, with a goal of increasing knowledge and decreasing negative attitudes. That remains a potentially important consideration for the future. However, findings from the current study cloud the issue to some extent.

The data from the SLPs in this study suggested that coursework during graduate training and postgraduation training was not strongly associated with the degree of negative attitude. If that holds true in replication studies, one has to question whether adding more coursework or continuing education opportunities would have a substantial effect on the negative attitudes of SLPs practicing clinically. There are a few issues to consider here. First, it is possible that the SLPs’ rating of academic exposure does not truly reflect what they experienced in their training given that the SLPs were having to reflect back on what courses they had taken. If their reports of academic exposure are inaccurate, interpretation of the correlation coefficient is not advisable. Future studies taking more direct assessment of SLPs’ academic exposure (and distinguishing graduate school vs. postgraduate school training) could shed light on this issue. A second possibility is that the SLPs’ knowledge of aging may not be based solely on academic coursework, whereas the CDIS students may draw more on their coursework when answering questions on the FAQ1. In this case, the number of courses taken by the SLPs may be accurately reported, but not significantly related to negative attitudes. This does not necessarily diminish the role of providing more academic information on aging during training. It may be that such training could foster increased interest in working with the
elderly or possibly limit the development of even more negative attitudes.

Perhaps the more intriguing issue is to identify whether a certain type of educational experience might help reduce negative attitudes in practicing SLPs. Formal academic coursework in aging seems like a reasonable approach to begin preparing SLP students to work with aging individuals. Working as a certified SLP in a health care setting, then, may have a positive influence on attitudes toward aging in that the pro-aged bias (i.e., unrealistically positive view of aging) is reduced. The focus then needs to be on a method of reducing the negative bias that persists from undergraduate/graduate students to practicing professionals.

In training medical students, it has been suggested that acquiring technical knowledge of aging and having clinical experience with the ill elderly may be insufficient to reduce negative biases of the students (Birenbaum, Aronson, & Seiffer, 1979; Coccaro & Miles, 1984). Although more study is needed on the topic, Coccaro and Miles (1984) have indicated that contact with healthy, more independently functioning older people may be needed to help counteract the negative attitudes that medical students may derive from an overabundant exposure to unhealthy older adults. Perhaps the same is true for SLPs. Like most health care workers, it seems likely that SLPs spend a great amount of time around older individuals who are hospitalized, institutionalized, ill, and/or dependent on others, which may help maintain negative attitudes. More study of SLPs’ attitudes toward aging and the elderly are needed to understand this complex issue.

A few limitations to this study deserve mention. The survey was restricted to SLPs practicing in the state of Ohio. There is no obvious reason to suspect that SLPs in this state would have knowledge of or attitudes toward aging that differ significantly from those of SLPs in other regions. However, future studies that sample more broadly geographically would be ideal. In addition, the descriptive and correlation approach in this study does not allow for conclusions regarding underlying causal factors for the attitudes expressed by the participants. Also, this was an initial attempt to describe SLPs’ knowledge of and attitudes toward aging and, as such, no attempts were made to manipulate their knowledge or attitudes. This may be an important approach to consider in future research. Ultimately, it will be of interest to identify how SLPs develop their attitudes and knowledge of aging and to explore the best means of maximizing knowledge and minimizing negative attitudes.

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APPENDIX. DEMOGRAPHIC AND BACKGROUND QUESTIONNAIRE

Directions: You are being asked to complete three questionnaires. It should not take more than 10–15 minutes to complete all three questionnaires. Please provide complete and honest answers to all of the questions. The first will ask you to answer some questions related to your educational and professional background, as well as your experiences with the elderly. The second will examine your perceptions of the elderly (individuals 70 and older). The third is a short true/false questionnaire about aging and the elderly. Remember that completion of the survey and returning it constitutes your agreement to participate in the study.

Please answer the following questions by choosing the appropriate option or filling in the blank.

1. Your age: ________
2. Gender:          male           female
3. Ethnicity: _______________________ (African American, Hispanic, etc.)
4. Number of years working as an SLP: _______
5. Number of years in your present position: _______
6. Highest degree attained: ________________ Do you hold the CCC? ____ yes ____ no
7. Describe your present work setting (choose the best option).
   _______ Acute care facility
   _______ Subacute care facility
   _______ Inpatient rehab
   _______ Outpatient rehab
   _______ Nursing home/long term care
   _______ Home health
   _______ Private practice
   _______ Other
8. What is the size of your average/typical caseload? ____________ What percentage of your average/typical caseload are older adults or elderly (>70)? _______________.
9. What percentage of your clients have the following impairments?
   _______ Aphasia
   _______ Dysarthria
   _______ Apraxia
   _______ Dysphagia
   _______ Cognitive
   _______ Voice/resonance
   _______ Laryngectomy/head and neck cancer
   _______ Other
10. Rate your level of professional interest in working with the elderly and the aging population.
    Low 1 2 3 4 5 High
11. Rate the amount of academic exposure, for example, coursework or continuing education, you had related to the elderly or gerontology.
    Low 1 2 3 4 5 High
12. Rate the benefits of these courses to your present career path.
    Low 1 2 3 4 5 High
13. Rate the amount of personal time (nonwork related) you have spent with older adults in the past year.
    Low 1 2 3 4 5 High
14. Are you interested in spending more time with older adults?
    Not interested 1 2 3 4 Very interested 5